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ABSTRACT

The goal of the Satellite Technology Demonstration (STD) is to create several types of educational television programs for a varied audience beamed by a communication satellite. The first program produced--"Time Out!"-- was a career exploration series written for junior high students. A "formative" semester permitted the series to be shown over 16 weeks to one audience and then revised by an internal review panel. STD made the following recommendations: (1) In cases of limited resources and a diverse audience, evaluation by a review panel, supplemented with audience data, is more satisfactory than the use of selected audience members or consultants; (2) panel should be composed of 5-6 members possessing a variety of knowledge and responsibilities and should include those responsible for implementing the results; (3) evaluation should be initiated simultaneously with video-production development; (4) members should make independent ratings, but should share findings in group dialog; (5) whenever possible, the primary source of similar evaluations should be done by the original audience with a panel used as a supplementary source. (NR)

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SATELLITE TECHNOLOGY DEMONSTRATION



FEDERATION OF ROCKY MOUNTAIN STATES, INC.

technical report

TR 0213

THE CONTRIBUTION OF AN INTERNAL
REVIEW PANEL TO THE DEVELOPMENT
OF EDUCATIONAL PROGRAMMING

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

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A. J. CONNOLLY

FRANK ANDERSON

INTRODUCTION

The Satellite Technology Demonstration (STD) has utilized the ATS-6 telecommunications satellite to distribute several types of educational television programs to varied audiences. The primary program, however, has been a career exploration series, titled "Time Out!", specifically designed for junior high school audiences. Because of its major role in the Demonstration, the "Time Out!" series has been the product of an extensive formative process which included a needs assessment, the field testing of sample scripts and video elements, and the establishment of a "formative" semester. The inclusion of a formative semester allowed the series to be shown over a sixteen-week period to one audience and subjected to revision prior to its reshowing to a second audience. Although the data inputs from overall formative process were varied and extensive, the STD decided to create an internal review panel. This paper will explore the contributions of this approach and will describe the methodology developed and the implementation of the process.

WHEN IS THERE A NEED FOR AN INTERNAL REVIEW?

The contribution of an internal review is ancillary to and determined by the scope and quality of the primary effort conducted with users. Formative efforts with users generally fall into two categories--either broad-based to obtain general acceptance data, or selective in-depth probes using a smaller subset of audience members. The broad-based approach may reinforce a producer's positive or negative feelings about a product under development, but it seldom provides the detailed information needed to direct specific product modification. Similarly, the in-depth probe may provide detailed information, but its generality and validity are subject to question. When resources permit, organizations would be well advised to employ a combination of these two strategies.

The Satellite Technology Demonstration (STD), because of scarce resources, was faced with choosing between the broad-based and selective in-depth approaches. However, in addressing the problem, it implemented what was perceived as a compromise alternative--an

internal review panel whose input could augment a broad-based acceptance effort conducted with primary users. The purpose of this panel was to provide constructive criticism in sufficient detail to facilitate program modifications.

THE ORGANIZATION OF AN INTERNAL REVIEW

The decision to implement an internal review panel was made by project management with the objective of providing an internal vehicle for monitoring program quality for subject matter content and production quality and assisting program revisions. The process involved the creation of a panel comprised of persons with both staff and administrative responsibilities within the project, including the associate project director, the director of research, the field coordinator, the content coordinator, and the executive producer.

This group was assembled in the fall of 1974, subsequent to the completion of approximately 60% of the "Time Out!" series programs and the initiation of their broadcast during the first semester. In addition to the daily program ratings being prepared by students and teachers, production personnel required segment-specific information upon which to base effective modifications in the programs for an improved second semester broadcast version. For the information to have utility during the estimated remaining production schedule, the panel had a two-month period to complete its detailed ratings and to provide suggestions for changes.

The nature of the information required for specific program modifications, in contrast to the information being collected from students and teachers, can be recognized when the structure of the programs is analyzed. Each 25-minute pretaped program consisted of several "segments" which were totally different in format and style. For instance, a single program might have four segments--one produced in "Time Control Central," a futuristic setting used for tying segments and program to daily instructional objectives; another in "Crossroads," a rural grocery store which included actor representation of youngsters of the Rocky Mountain Region student audience; a segment of "available materials," usually film clips on specific jobs; and a "Dr. DOT" segment, a carnival "barker" format used to present The Dic-

tionary of Occupational Titles. The type of questions asked (because of limited class time) of teachers and students revealed only that a total program had received poor acceptance by the audience. The information was not of sufficient detail to direct specific program modifications. The production staff needed to know which segment within a program was unacceptable and, if possible, which specific "characteristics" of that segment were not appealing; i.e., lengthy discussion, redundancy of points being addressed, poor video quality, inappropriate vocabulary.

In addition to the internal evaluation and the previously designed general acceptance data, a more detailed mid-semester instrument was designed and implemented for students and teachers. This instrument produced user acceptance data on specific vehicles and formats, but did not associate them with particular programs nor indicate variations in vehicle across programs. This combination of the in-house panel review and the more specific student evaluation data were designed to provide the effective modifications of segments or entire programs.

The internal review was intended both to supplement and validate the student information. It was the panel's hope that the STD staff personnel would identify actual "characteristics" of segments which would be the cause of low student/teacher acceptance. It was assumed that instruments could be designed to obtain student acceptance on the "segment" level of programs, but that it was not efficiently possible to determine what particular format or content characteristics generated the students' low acceptance. The panel review was designed to rate each segment in terms of specific characteristics as shown in Fig. 1 (educational appropriateness, entertainment value, vocabulary level, acting believability and delivery, pacing, video and audio technical quality, etc.). This was the detailed information to be used and correlated with the student acceptance of entire segments, which would indicate the required segment change.

IMPLEMENTATION OF PANEL ACTIVITIES

Once its responsibilities had been identified, the panel met with content and production

Program J-33		Reviewer _____ Date of Review _____																																																																																																							
I. <u>Program Objectives</u> The student will identify careers that fall under or are related to the Farming, Fishery, and Forestry family. The student will identify some viable options following graduation from high school.																																																																																																									
II. <u>Point of Program</u> To introduce additional jobs that are included in this job category and to point out required training, possibilities for advancement and the outlook for the future when feasible. To introduce options after high school.																																																																																																									
III. <u>Segment Codes</u> <table style="width: 100%; border: none;"> <tr> <td>j207 - Ben Reviews FFF</td> <td style="text-align: right;">11:30</td> </tr> <tr> <td>j208 - A Bit of Expert Advice</td> <td style="text-align: right;">8:00</td> </tr> <tr> <td>j208a- Seriously, Now</td> <td style="text-align: right;">1:30</td> </tr> <tr> <td>j55a - Eddie tries to Cheer up a Friend</td> <td style="text-align: right;">5:30</td> </tr> <tr> <td>j55b - Ben and Sam Comment on Eddie Tries to Cheer up a Friend</td> <td style="text-align: right;">1:30</td> </tr> </table>				j207 - Ben Reviews FFF	11:30	j208 - A Bit of Expert Advice	8:00	j208a- Seriously, Now	1:30	j55a - Eddie tries to Cheer up a Friend	5:30	j55b - Ben and Sam Comment on Eddie Tries to Cheer up a Friend	1:30																																																																																												
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V. <u>Segment Ratings</u> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="padding: 5px;">Content</th> <th style="padding: 5px;">j207</th> <th style="padding: 5px;">j208</th> <th style="padding: 5px;">j208a</th> <th style="padding: 5px;">j55a</th> <th style="padding: 5px;">j55b</th> </tr> </thead> <tbody> <tr><td style="padding: 5px;">A. Educational Appropriateness</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td></tr> <tr><td style="padding: 5px;">B. Entertainment Value</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td></tr> <tr><td style="padding: 5px;">C. Vocabulary Level</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td></tr> <tr><td style="padding: 5px;">D. Development of Ideas (Clarity, Seq.)</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td></tr> <tr><td colspan="6" style="padding: 5px;"><u>Production</u></td></tr> <tr><td style="padding: 5px;">A. Acting (Believability, Delivery)</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td></tr> <tr><td style="padding: 5px;">B. Delivery Vehicle (Set, Special Effects, Format)</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td></tr> <tr><td style="padding: 5px;">C. Pacing (Segment Length, etc.)</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td></tr> <tr><td style="padding: 5px;">D. Understandability (Diction, etc.)</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td></tr> <tr><td colspan="6" style="padding: 5px;"><u>Technical Quality</u></td></tr> <tr><td style="padding: 5px;">A. Video (Resolution, Color)</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td></tr> <tr><td style="padding: 5px;">B. Audio (Noise Level, Fluctuation)</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td></tr> <tr><td colspan="6" style="padding: 5px;"><u>Segment in General</u></td></tr> <tr><td style="padding: 5px;">A. General Rating</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td></tr> <tr><td colspan="6" style="padding: 5px;"><u>Recommendation</u></td></tr> <tr><td style="padding: 5px;">A. Modify (y) yes, (n) no</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td><td style="text-align: center;">—</td></tr> </tbody> </table>				Content	j207	j208	j208a	j55a	j55b	A. Educational Appropriateness	—	—	—	—	—	B. Entertainment Value	—	—	—	—	—	C. Vocabulary Level	—	—	—	—	—	D. Development of Ideas (Clarity, Seq.)	—	—	—	—	—	<u>Production</u>						A. Acting (Believability, Delivery)	—	—	—	—	—	B. Delivery Vehicle (Set, Special Effects, Format)	—	—	—	—	—	C. Pacing (Segment Length, etc.)	—	—	—	—	—	D. Understandability (Diction, etc.)	—	—	—	—	—	<u>Technical Quality</u>						A. Video (Resolution, Color)	—	—	—	—	—	B. Audio (Noise Level, Fluctuation)	—	—	—	—	—	<u>Segment in General</u>						A. General Rating	—	—	—	—	—	<u>Recommendation</u>						A. Modify (y) yes, (n) no	—	—	—	—	—
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Figure 1. Evaluation form used by the Internal Review Team.

personnel. These meetings produced the instrument shown in Fig. 1. A two-month schedule for review of the programs was set up and the panel adopted a strategy of convening two afternoons per week to review six to eight half-hour programs per session. Reviewing consecutive programs made comparisons between programs easier and enhanced the quantity of the panel's evaluation. However, it was soon found that reviewing more than five consecutive programs was too fatiguing.

For the first three or four weeks after its implementation, the review panel met routinely. As it became apparent that not all programs could be reviewed in the required time due to staff availability and a rigid evaluation schedule, more flexible scheduling was implemented--panel members could independently review films in accordance with their own schedules. This flexible schedule was maintained until the panel's activity was terminated because (1) essential trends on specific segments had been identified from the panel's and the previously referenced special student evaluation data, and (2) based on these trends, the remaining available production schedule had become committed to the necessary modifications for entire formats such as the Dr. DOT segments.

RESULTS OF THE INTERNAL REVIEW PANEL

Although the panel did not review all programs, it provided meaningful data on 84% of the 69 pre-taped programs in the "Time Out!" series. The information yield from the review panel's efforts consisted of:

- (1) A trend line which illustrated the relative quality of each program as perceived by the panel. This trend line was augmented by placing an asterisk beside the numeral of any program having one or more segments perceived to be in need of revision.
- (2) A trend line for each program, illustrating the relative quality of each segment as perceived by the panel. Segments in need of revision were clearly identified.
- (3) An evaluation form for each program which showed the composite ratings of panel members on each program attribute.
- (4) A compilation of panel members' comments and suggestions regarding each program.

Fig. 2 below presents a section of the trend line produced by the ratings of the review panel. It was desirable to see how closely the perceptions of the panel members correlated with the ratings made by the junior high school audience; therefore, the panel's ratings have been superimposed on student ratings for the same programs. Although student ratings were obtained on several program aspects (e.g., interaction, support materials, in-class activities, etc.) for the purposes of the comparison illustrated in Fig. 2, a trend line reflecting the percentage of students rating each program "excellent" was used. Because of the large number of youngsters involved, STD researchers found this rating to be a sensitive and reliable acceptance indicator.

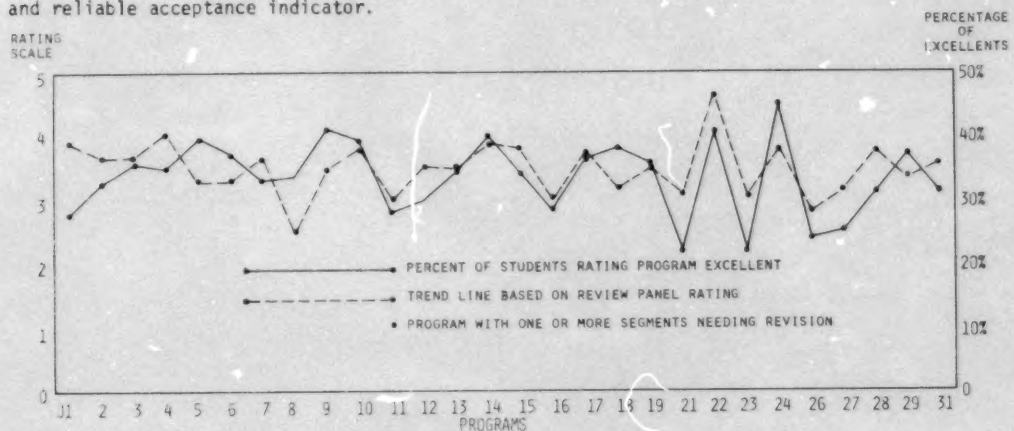


Figure 2. Trend lines indicating student acceptance and panel's evaluation across programs J1 through J31 (excludes J20, J25, and J30, which were live).

A perusal of Fig. 2 will show a positive correlation between the students' and the panel's ratings. However, the review panel also provided detailed feedback which was not available from the students.

In addition to providing trend lines across programs, the panel also developed trend lines to illustrate quality variations within programs. Fig. 3 illustrates the trend lines of three programs. The general ratings of all three of these programs are considered positive; however, as the graph indicates, the general ratings of 3.6 on program J12 was obtained by averaging the ratings of both very strong and very weak segments. Therefore, while

none of the segments in programs J10 and J15 were recommended for changes, two segments (j73 and j141) in program J12 were recommended for revision.

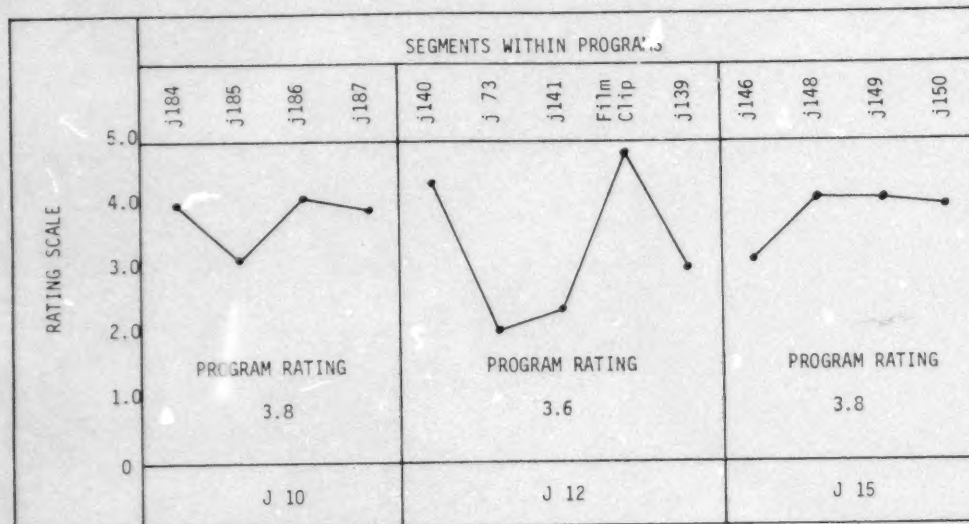


Figure 3. Trend lines revealing panel's evaluation of segments within programs J10, J12, and J15.

By referring to the composite detailed evaluation form for program J12, content and production personnel were able to determine what characteristics of each of the segments were weak. Segment j73, for example, received "good" ratings in areas relating to technical quality, but very low ratings on the development of ideas, pacing and understandability. Written comments by panel members, which augmented the ratings on j73 included: "Basic vehicle and idea are valid, but moves too fast!" "Isn't easily understood--too long a segment and dialogue too fast." Segment j141 was rated quite differently; it received high ratings in the content area but low ratings on acting, understandability (diction), and audio quality. The panel members' written comments on this segment included: "Eddie doesn't speak clearly." "Acting strained." "Re-do Eddie's lines!"

Approximately 50% of the programs reviewed by the panel included one or more segments recommended for revision. These recommendations, along with data from several other sources, were utilized by the production personnel responsible for modifying programs and segments.

Because resource restrictions limited the number of possible revisions actually implemented, the following priorities served as guidelines in the merger of recommendations and budget/time/facilities limitations:

First Priority - Revise formats or characterizations that have negative impact across several programs.

Second Priority - Revise programs that have generally low acceptance throughout.

Third Priority - Revise programs that have one or more unique segments which are weak but also some which are strong.

To illustrate the use of these priority guidelines, reference can be made again to the segment ratings of program J12 in Fig. 3, which was reasonably strong overall, having two weak segments. One of these segments, j73, dealt with the W. C. Fields type character, "Dr. DOT." General comments received from the primary student audience indicated that Dr. DOT's "carnival barker" role was too verbal and contained too much fast-paced dialogue to be effective. Because "Dr. DOT" was in several programs and was rated as ineffective by panel members, all "Dr. DOT" segments were modified, including j73. "Dr. DOT" represents an example of a first-priority item. The other weak segment in the J12 program, however, was left intact because its weakness in diction and auditory problems did not adversely affect the rest of the program. This segment, therefore, represents an item accorded third-priority status.

RECOMMENDATIONS REGARDING THE USE OF INTERNAL REVIEW PANELS

The modifications, specific to program J12, illustrate the general application of the data provided by the review panel. Panel output was always used in conjunction with data from the primary audience. Having implemented an internal review panel and having experienced its contributions as well as its frustrations, the STD makes the following recommendations:

(1) Generally, there are three options available to obtain detailed guidance for program modifications: a. intense observations and experimentation with selected audience members; b. the use of consultants; or c. the utilization of a review panel. With limited

resources and with a diverse audience, the STD implemented the third option, supported by general data from audience members. Although the STD did not review all programs, the panel generated meaningful data sufficient to support our assertion that the process is viable.

(2) The review panel is time-consuming and requires perceptions from different disciplines. Careful consideration should therefore be given to composition of the panel in terms of staff availability. Ideally, a review panel would contain five or six members representing varying levels of responsibility and different disciplines, including production and project management personnel who are most likely to be implementing the derived recommendations to insure consistency with the organization's contractual responsibilities.

(3) The review panel, although a time-consuming task, is a good source of detailed professional information. We would recommend that if a review panel effort is implemented, it be initiated simultaneously with video-production development, and that the necessary budget considerations be given to provide the resources of time, personnel, and equipment needed.

(4) In the implementation of the internal review process, the STD found that both the quality of the reviews and the morale of the participants were higher when panel members met as a group; i.e., each member making an individual rating, but also having an opportunity to share perceptions with other members.

(5) The use of an internal panel can serve to effectively supplement, with more specific and production-related detail, alternative sources of information. However, the implementation of such an effort should be considered only after initially considering a project's capability of obtaining similar detail from the primary audience. It is recommended that personnel responsible for production and evaluation activities work closely together in the planning phases of both activities to investigate this possibility for effective design of formative evaluation data.

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